Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 18-25 and 28-36 are pending in the application, with claims 18 and 31 being the independent claims.

Claims 26 and 27 are sought to be cancelled without prejudice to or disclaimer of the subject matter therein. Claims 1-17 were previously cancelled.

New claims 35 and 36 are sought to be added. Support for these new claims may be found at least in the third paragraph of page 4 of the specification.

These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Objections to the Drawings

The drawings are objected to because the features of claims 26 and 27 are not shown in the drawings. For the purposes of expediting prosecution, claims 26 and 27 are sought to be cancelled herein. Accordingly, Applicant respectfully requests that the objection to the drawings be reconsidered and withdrawn.

Objections to the Specification

The specification is objected to for allegedly failing to provide proper antecedent basis for the subject matter of claims 26 and 27. For the purposes of expediting

prosecution, claims 26 and 27 are sought to be cancelled herein. Accordingly, Applicant respectfully requests that the objection to the specification be reconsidered and withdrawn.

Rejections of Claims 18-30

Claims 18, 20, 23, and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,116,043 to Clark *et al.* ("Clark") in view of U.S. Patent No. 6,216,469 to Miller and in further view of U.S. Patent No. 6,301,904 to Goldstein. Claims 19, 21, 22, 24, 25, and 27-30 are also rejected under 35 U.S.C. § 103(a) as being unpatentable over Clark in view of Miller and in further view of Goldstein and in further view of one or more additional documents. Applicant respectfully traverses these rejections.

Independent claim 18 is directed to a method for tempering at least one packaged product unit in a treatment tank. The method comprises:

> placing the at least one packaged product unit in the treatment tank;
>
> introducing an ice slurry comprising water and ice particles into the treatment tank; and
>
> circulating the ice slurry in the treatment tank around the at least one packaged product unit in order to cool the at least one packaged product unit, wherein the ice slurry present in an overflow trough located at an upper part of the treatment tank is pumped through a pipe connected to the overflow trough and injected back into the treatment tank through at least one injection nozzle.

Clark, Miller and Goldstein, either alone or in combination, fail to disclose or render obvious the claimed invention.

Clark is directed to a food processing apparatus wherein liquid 22 in a tank 16 is recirculated by pumping liquid 22 exiting tank 16 through a drain 32, located at the bottom of tank 16, back into tank 16 through nozzle 28 at the top of tank 16. See Fig. 1. This is opposite to the claimed circulation wherein ice slurry present in an overflow trough located at an upper part of the treatment tank is pumped to through a pipe and injected back into the treatment tank. Further, while Clark discloses an overflow tube 134 to allow excess liquid to drain from the tank and into a bottom drain or sump 138 (see col. 6, lines 39-41), Clark provides no disclosure or rationale for circulating the excess liquid back into tank 16. Miller does not cure this deficiency of Clark. The Examiner relies on Goldstein to cure this deficiency of Clark.

While the Examiner relies on Goldstein to cure the deficiency noted above in Clark, one of ordinary skill in the art would not have had sufficient rationale to modify Clark in view of Goldstein to arrive at the claimed invention. In particular, Goldstein discloses a system 40 having a storage tank 412 for holding an ice slurry wherein an aqueous solution and scraped ice are mixed by an agitator 426 and delivered to an ice slurry to a delivery line 460. The ice slurry is then circulated by pump 464 through a conduit 468 where it is returned to storage tank 412 via nozzle 474. See Fig. 4 and col. 6, lines 46-65.

The Examiner asserts it would have been obvious to recycle any slurry exiting tank 16 through overflow tube 134 back into tank 16 in Clark in view of Goldstein. However, the purpose of storage tank 412 in Goldstein is to store the ice slurry for delivery to discharge points through hoses 488 to containers external to system 40. Hence, it makes sense in Goldstein to have the undischarged portion of the ice slurry

returned to storage tank 412 for later use, in particular since the storage tank in Goldstein is not a treatment tank (no packages are placed in the storage tank for tempering). See Fig. 4 and col. 6, line 46 to col. 7, line 2. Accordingly, one of ordinary skill in the art would have readily appreciated that tank 16 in Clark is a treatment tank and that there is no need to recycle the overflow. Further, in Clark, liquid 22 is already recirculated from drain 32 through conduit 34 back into tank 16 through nozzle 28 and there is no need to provide additional recirculation of liquid 22. Accordingly, there would have been no rationale for one of ordinary skill in the art to modify Clark as suggested by the Examiner for further recycling, absent impermissible hindsight. Thus, the Examiner has failed to establish a *prima facie* case of obviousness.

For at least the above reasons, independent claim 18, and claims 19-25, 28-30, and 35 which depend therefrom, are allowable. Accordingly, Applicant respectfully requests that these rejections be reconsidered and withdrawn, and the claims allowed.

New Dependent Claim 35

Newly added dependent claim 35, depends from claim 18 and is allowable for at least the reasons noted above. Claim 35 is also independently allowable for the reasons discussed below.

Claim 35 recites the at least one injection nozzle is positioned to inject the ice slurry present in the overflow trough horizontally into the treatment tank. Injecting the ice slurry horizontally into the treatment tank provides the benefit of injecting the ice slurry in between the at least one packaged product. The small ice particles present in the ice slurry represent a large contact surface for chilling the packages and thus provides

a highly effective heat transfer and chilling process. In addition, by injecting the ice slurry horizontally, it delays upward rise of the ice particles in the slurry. Clark, Miller, and Goldstein fail to disclose or provide a rationale for positioning the at least one injection nozzle to inject the ice slurry present in the overflow trough horizontally into the treatment tank, as claimed, in combination with the recitations of claim 18.

For at least the reasons noted above, dependent claim 35 is allowable over the cited documents.

Rejections of Claims 31-34

Claims 31 and 32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Clark in view of Goldstein. Claims 33 and 34 are also rejected under 35 U.S.C. § 103(a) as being unpatentable over Clark in view Goldstein and in further view of an additional document. Applicant respectfully traverses these rejections.

The Goldstein patent fails to disclose the claimed invention. Independent claim 31 is directed to a system for tempering at least one packaged product unit utilizing an ice slurry comprising water and ice particles. The system comprises:

> at least one treatment tank for submerging the at least one packaged product unit, wherein the at least one treatment tank comprises an upper part with an overflow trough;
>
> at least one injection nozzle;
>
> a pipe connecting the overflow trough and the at least one injection nozzle; and
>
> a pump associated with the pipe for pumping ice slurry present in the overflow trough through the pipe and injecting the ice slurry back into the at least one treatment tank through the least one injection nozzle so as to circulate the ice slurry in the at least one treatment tank around the at least one packaged product unit in order to cool the at least one packaged product unit.

Clark and Goldstein, either alone or in combination, fail to disclose or render obvious the claimed invention.

Clark is directed to a food processing apparatus wherein liquid 22 in a tank 16 is recirculated by pumping liquid 22 exiting tank 16 through a drain 32, located at the bottom of tank 16, back into tank 16 through nozzle 28 at the top of tank 16. See Fig. 1. This is opposite to the claimed circulation wherein ice slurry present in an overflow trough located at an upper part of the treatment tank is pumped to through a pipe and injected back into the treatment tank. Further, while Clark discloses an overflow tube 134 to allow excess liquid to drain from the tank and into a bottom drain or sump 138 (see col. 6, lines 39-41), Clark provides no disclosure or rationale for circulating the excess liquid back into tank 16. The Examiner relies on Goldstein to cure this deficiency of Clark.

While the Examiner relies on Goldstein to cure the deficiency noted above in Clark, one of ordinary skill in the art would not have had sufficient rationale to modify Clark in view of Goldstein to arrive at the claimed invention. In particular, Goldstein discloses a system 40 having a storage tank 412 for holding an ice slurry wherein an aqueous solution and scraped ice are mixed by an agitator 426 and delivered to an ice slurry to a delivery line 460. The ice slurry is then circulated by pump 464 through a conduit 468 where it is returned to storage tank 412 via nozzle 474. See Fig. 4 and col. 6, lines 46-65.

The Examiner asserts it would have been obvious to recycle any slurry exiting tank 16 through overflow tube 134 back into tank 16 in Clark in view of Goldstein.

However, the purpose of storage tank 412 in Goldstein is to store the ice slurry for delivery to discharge points through hoses 488 to containers external to system 40. Hence, it makes sense in Goldstein to have the undischarged portion of the ice slurry returned to storage tank 412 for later use, in particular since the storage tank in Goldstein is not a treatment tank (no packages are placed in the storage tank for tempering). See Fig. 4 and col. 6, line 46 to col. 7, line 2. Accordingly, one of ordinary skill in the art would have readily appreciated that tank 16 in Clark is a treatment tank and that there is no need to recycle the overflow. Further, in Clark, liquid 22 is already recirculated from drain 32 through conduit 34 back into tank 16 through nozzle 28 and there is no need to provide additional recirculation of liquid 22. Accordingly, there would have been no rationale for one of ordinary skill in the art to modify Clark as suggested by the Examiner for further recycling, absent impermissible hindsight. Thus, the Examiner has failed to establish a *prima facie* case of obviousness.

For at least the above reasons, independent claim 31, and claims 32-34 and 36 which depend therefrom, are allowable. Accordingly, Applicant respectfully requests that these rejections be reconsidered and withdrawn, and the claims allowed.

New Dependent Claim 36

Newly added dependent claim 36, depends from claim 31 and is allowable for at least the reasons noted above. Claim 36 is also independently allowable for the reasons discussed below.

Claim 36 recites the at least one injection nozzle is positioned to inject the ice slurry present in the overflow trough horizontally into the treatment tank. Injecting the

ice slurry horizontally into the treatment tank provides the benefit of injecting the ice slurry in between the at least one packaged product. The small ice particles present in the ice slurry represent a large contact surface for chilling the packages and thus provides a highly effective heat transfer and chilling process. In addition, by injecting the ice slurry horizontally, it delays upward rise of the ice particles in the slurry. Clark and Goldstein fail to disclose or provide a rationale for positioning the at least one injection nozzle to inject the ice slurry present in the overflow trough horizontally into the treatment tank, as claimed, in combination with the recitations of claim 18.

For at least the reasons noted above, dependent claim 36 is allowable over the cited documents.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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Date: March 24, 2010

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